

DOES EXPOSURE TO MUSIC VIDEOS PREDICT ADOLESCENTS' SEXUAL ATTITUDES?

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Abstract

This study investigates whether exposure to music videos predicts adolescents' sexual attitudes when controlled for relevant characteristics of individuals and their social environment. Sexual attitudes are related to their music video use (i.e. exposure to music videos, peer group talk about music videos, and perceived realism of these videos), personal factors and the sexual norms they perceive in their social environment (i.e. sexual norms of their parents and friends). A survey among Dutch adolescents (age 13-18; N = 384) showed that time spent watching music videos, peer group discussions about music videos, and perceived realism of music videos are all positively related to the traditional attitudes that men dominate sexual relationships, and that women are sex objects. This relationship cannot be explained away with individual characteristics (i.e. gender, age, education), and the sexual norms that adolescents perceive in their social environment. So we conclude that it is very well possible that music videos play a role in the formation and reinforcement of traditional sexual attitudes.

Keywords: Music videos, sexual attitudes, adolescents

Introduction

Television shows numerous images of sexual relationships and plays an important role in the lives of youngsters. Therefore, it is assumed that television's impact on children's sexual attitudes is substantial (e.g., Strasburger, 1995). Because sexual relationships are clearly stereotyped in popular television genres, many have asked the question whether these images result in stereotyped sexual attitudes among children and youngsters. Popular among youngsters are music videos. Although music videos make up a heterogeneous genre, content

analyses show that music videos of rap, hip-hop and R&B artists generally contain many female-unfriendly images of sexual relationships (Tapper, Thorson & Black, 1994).

On the one hand, it seems plausible that music videos may have an impact on the formation of young people's sexual attitudes. According to social cognitive theory (Bandura, 2002) this is likely because the popular artists in music videos are attractive role models; and according to cultivation theory (Gerbner, Gross, Morgan, Signorielli, & Shanahan, 2002) it is plausible because the sexual images are large in number and carry similar messages. On the other hand, one may argue that music videos cannot have much impact because adolescents do not regard music videos to be a serious source of information about sexual relationships, and because they get their information from other sources – including their own experience – that provide competing images. Based on previous research, this study investigates the relationship between adolescents' sexual attitudes and their music video viewing, controlling for various factors that according to previous research are also likely to predict sexual attitudes. The study differs from previous studies because it investigates more factors at the same time, and because all measures specifically pertain to music videos instead of media use in general.

Previous research

The relationship between watching music videos and sexual attitudes was investigated in both experimental and survey studies. The available experimental studies indicated that after having watched one or more sexually stereotyped music videos, adolescents were more likely to have both liberal and female-unfriendly sexual attitudes than after having seen no music videos or videos that did not contain sexually stereotyped images (Calvin et al., 1993; Greeson & Williams, 1986; Johnson, Adams, Ashburn & Reed, 1995; Kalof, 1999; Ward, Hansbrough & Walker, 2005).

In some experimental studies participants' gender proved to have an impact. Johnson et al. (1995), for instance, divided African-American adolescents aged 11-16 years in an experimental and a control group. The experimental group watched eight nonviolent rap videos in which women played a submissive role, whereas the control group did not see any music videos. All participants answered questions about the permissibility of violence against women on date. In the control group, boys regarded the use of violence on a date more acceptable than did girls; in the experimental group, however, there was no difference between boys and girls, presumably as a result of watching the videos. So among girls, watching the rap videos resulted in higher acceptance of the use of violence on a date, whereas the videos did not affect the boys. A possible explanation for the stronger effects

among girls is that the group average on stereotyped sexual attitudes for boys is sufficiently high to cause a ceiling effect (Ward, 2003).

In addition to studies on the impact of music videos on sexual attitudes, various experiments investigated the effect of sex in other fiction genres. Results were ambiguous. Some studies reported effects on sexual attitudes, albeit not on all sexual attitudes (Bryant & Rockwell, 1994; Taylor, 2005; Ward, 2002; Ward & Friedman, 2006), whereas others reported no effects (Greenberg, Linsangman, & Soderman, 1993). A plausible explanation for the inconsistency of results is that not all depictions of sexual relationships are perceived as realistic. In order to test this explanation, Taylor (2005) carried out an experiment among 18-26 year old university students with three types of clips from television series: clips showing sexual acts, clips with talk about sex, and clips without sex. Participants watched only one type of clip. Afterwards they answered questions about their attitudes toward the permissibility of sex in casual relationships and their estimate of sexual activity among their peers. In addition, participants indicated how realistic they perceived the clips to be. Results showed the importance of perceived realism because only among respondents who regarded the clips as relatively realistic, watching the clips with sexual acts or talk about sex resulted in higher acceptance of sex in casual relationships, whereas the clips with verbal sex also raised the belief that female peers were sexually active. The results suggested that perceived realism was conditional for the effect on sexual attitudes.

Based on the available experimental studies we may conclude that sexual media content, including music videos have a short-term effect on sexual attitudes; and that the effect varies by gender of participants and the extent to which the content is perceived as realistic. The effects of clips on sexual attitudes are noteworthy because young people watch a great deal of television series and music videos in their daily lives. Therefore it is not self-evident that the relatively short exposure in experiments would result in discernible effects on sexual attitudes. The effects may be explained in terms of ‘priming’ or activation of existing attitudes. It is assumed that repeated activation makes attitudes stronger so that short-term effects may result in long-term impact (Jo & Berkowitz, 1994; Taylor, 2005; Ward, 2003).

In addition to experimental studies there are several survey-studies that address the connection between music videos and sexual attitudes. In these studies, spending more time watching music videos corresponded to more traditional sexual attitudes and higher estimates of other people’s sexual activity (Buerkel-Rothfuss & Strouse, 1993; Strouse, Buerkel-Rothfuss & Long, 1995; Strouse, Goodwin & Roscoe, 1994; Ward 2002; Ward et al., 2005; Zhang, Miller & Harrison, 2008). Sexual attitudes were predicted not only by watching music

videos but also by watching various other prime-time programs with sexual content (Aubrey, Harrison, Kramer & Yellin, 2003; Ward, 2002; Ward & Friedman, 2006).

Like experimental research, survey studies found differences in sexual attitudes between male and female respondents. In general, men appeared to expect more sex from their partners than did women; men more often mentioned ‘fun’ as a motive for sex; and men had more permissive sexual attitudes (Aubrey et al., 2003). Moreover, Aubrey et al. (2003) found gender-specific relationships between watching sexual content on television and sexual expectations. Among men, viewing frequency of sexual content was related to the expectation that a variety of sexual activities would take place in a relationship (e.g., “heavy petting” and “using food during foreplay”), whereas among women viewing sexual content positively correlated to the expectation that partners would have sex in an early stage of their relationship.

Some studies on sexual attitudes included variables that are akin to perceived realism but the operationalization of these variables was not focused on music videos (Aubrey et al, 2003; Ward, 2002; Ward & Friedman, 2006). Ward and Friedman (2006) for instance investigated the relationship between on the one hand sexual attitudes and on the other hand viewing motives and identification. The operationalization of viewing motive addressed television viewing in general (e.g., “I watch TV because it helps me learn about myself and others”), whereas the identification items concerned a number of popular prime-time characters and not artists in music videos. This general version of television identification appeared to predict the belief that women are sexual objects, but due to the general nature of the items it is not clear whether this finding applies to music videos.

In sum, the available experimental and survey studies about the connection between music videos and sexual attitudes allow some preliminary conclusions. First, in experimental situations, watching music videos results in reinforcement of traditional sexual attitudes and a higher estimate of other people’s sexual activity. Second, in daily life these attitudes and estimates are related to watching music videos. Third, effects and correlations depend on the gender of respondents and the extent to which they regard the music videos as realistic. More specific conclusions are not warranted because few studies were focused on music videos with regards to the choice and operationalization of variables. The study presented in this paper focuses on music videos by selecting variables that are specifically relevant to the relationship between watching music videos and various types of sexual attitudes.

Variable selection and hypotheses

A first group of relevant variables are the sexual attitudes that are based on previous content analyses of music videos (Ward, 1995). These attitudes may be divided into two categories: (a) attitudes toward the sexual roles of men and women – men are dominant in sexual relationships and women are sexual objects (Strouse et al., 1994; Ward, 2002; Ward et al., 2005; Ward & Friedman, 2006; Zhang et al., 2008); and (b) attitudes toward casual, noncommittal sexual relationships in general – sex is a recreational pastime without any consequences (Buerkel-Rothfuss & Strouse, 1993; Strouse et al., 1995; Taylor, 2005; Ward, 2002; Ward et al., 2005; Ward & Friedman, 2006; Zhang et al., 2008). In previous survey studies, three other types of variables that are related to sexual attitudes were also found to correlate with watching music videos, namely attitudes toward nonsexual gender roles (Cobb & Boettcher, 2007; Ward, 2002; Ward et al., 2005; Ward & Friedman, 2006), the estimation of sexual activity among peers (Buerkel-Rothfuss & Strouse, 1993; Taylor, 2005; Ward, 2002), and self-reported sexual behavior (Collins et al., 2004; Ward, 2002; Ward & Friedman, 2006; Wingood, DiClemente, Bernhardt, & Harrington, 2003). Attitudes toward nonsexual gender roles may be related to attitudes toward the sexual roles of men and women, whereas the estimation of one's own and others' sexual behavior may be related to the belief that sexual relationships are casual. The present study focuses on sexual attitudes and does not include attitudes toward nonsexual roles and sexual behavior.

A second group of relevant variables concerns exposure to music videos. Exposure to music videos was conceptualized in various ways, mostly as self-reported estimates of viewing time or viewing frequency. Besides it seems important whether clips are a topic of conversation. Some researchers asked whether respondents talked about music videos and whether they watched them in the company of peers (Strouse et al., 1994; Wingood et al., 2003). In a study among 458 adolescents aged 11-16 years, Strouse et al. (1994) found that a higher frequency of discussions with friends about MTV correlated with more acceptance of sexual harassment. The reason to expect that both the frequency of viewing music videos and the frequency of discussions about music videos may predict sexual attitudes is similar. As respondents more frequently watch or discuss music videos, they are more likely to use the contents of the videos in the formation or reinforcement of sexual attitudes. In addition to the variables that concern the quantity of exposure to music videos, viewing time and frequency of discussions, another variable addresses the quality of exposure, namely the extent to which the content of music videos is perceived as realistic. As discussed above, only one study (Ward et al., 2005) included questions that addressed the perceived realism of music

videos. Yet, perceived realism of content may influence how young viewers interpret music videos (cf. Taylor, 2005). For if viewers qualify the content of music videos as not realistic, it is less likely that the content may influence their sexual socialization. Therefore, we investigate the following threefold hypothesis:

H1: (a) The time spent watching music videos, (b) the frequency of discussion about music videos, and (c) the extent to which music videos are perceived as realistic are positively correlated to sexual attitudes that correspond to the content of the videos.

One experimental study in which participants watched a number of specific music videos found effects on sexual attitudes only among participants with high levels of perceived realism (Taylor, 2005). We will investigate whether we can replicate this experimental finding in our survey study.

RQ1: Does the extent to which respondents regard music videos as realistic influence the relationship between on the one hand (a) viewing time and (b) discussion frequency of music videos, and on the other hand sexual attitudes that correspond to the content of the videos?

Besides the quantity and quality of exposure, other variables may influence the nature of sexual attitudes. These variables may be divided into two groups: individual and social environmental characteristics. Relevant individual characteristics may be age, and educational level which in this study will be regarded as control variables. Particularly relevant is gender. Because men and women fulfill different roles in music videos, it is plausible that interpretations of the events in music videos differ by gender. Some research findings concur with this assumption. Survey studies found that male respondents generally have more traditional attitudes about sexual and non-sexual relationships than women (Greenberg et al., 1993; Ward & Rivadeneyra, 1999; Eggermont, 2005). In addition, experimental studies showed that among female participants viewing time of music videos is a better predictor of traditional sexual attitudes than among men (Johnson et al., 1995; Ward, 2002), possibly because in this respect men are more traditional to begin with (Ward 2003). Again we will see whether this experimental finding may be replicated in our survey study.

RQ2: Does respondents' gender influence the relationship between on the one hand (a) viewing time and (b) discussion frequency of music videos, and on the other hand sexual attitudes that correspond to the content of the videos?

Next to their individual characteristics, adolescents' social environment seems relevant because that may influence their interpretation and appreciation of music videos. Research based on the theory of reasoned action shows the impact of normative beliefs in the

social environment on attitudes and behavioral intentions (Hale, Householder & Greene, 2003). Considering the importance of the peer group for adolescents in their everyday lives, not only perceived sexual attitudes of parents but also perceived sexual attitudes of friends are likely to be relevant. Like age and educational level, perceived sexual attitudes of parents and friends will be treated as control variables.

In sum, the survey study presented below investigates the extent to which various sexual attitudes are predicted by three types of variables: exposure to music videos, measured by two quantitative indicators (viewing time and discussion frequency) and one qualitative indicator (perceived realism); individual characteristics (gender, age, and educational level); and norms in the social environment (perceived sexual attitudes of respectively parents and friends). Three of these possibly important variables were not included in previous survey studies about the relationship between music videos and sexual attitudes, namely perceived realism of music videos and the perceived attitudes toward sex held by parents and friends.

Main Text

Materials and Methodology

Respondents and procedure

The variables were operationalized in a paper and pencil questionnaire that was administered to 384 students (61% female) between 13 and 18 years of age ($M=15.7$) attending four different schools in the Netherlands. Forty-two percent of the respondents indicated to belong to another ethnic group than the indigenous Dutch (Moroccan 12%, Turkish 12%, Surinamese 7%, Antillean 3%, other 8%). The respondents were either attending some form of vocational school ($N=205$) or some form of theoretical secondary school ($N=179$). The questionnaire was administered in the classroom in the presence of a teacher.

Measurement instruments

During the pilot stage of the questionnaire, we asked youngsters to provide us with a label for sexually suggestive music videos, that would be a clear term for their peers. They came up with the Dutch term “rap/hiphopvideoclips”, which is best translated as “rap/hiphop music videos”. Consequently, we used this label throughout our questionnaire. Thus, we measured exposure to sexually suggestive music videos by asking our respondents how many days a week they usually watched rap/hiphop music videos, and on such days, how many minutes on average. From the answers to these questions we computed the daily average (viewing time).

To determine the frequency of discussion about music videos in their circle of friends, we asked the respondents to react to seven statements on a four point scale that ranges from 1

(never) to 4 (often). These statements were: “Together with my friends, I watch music channels like MTV, TMF and The Box.” “My friends ask me whether I have seen a particular music video on TV.” “I make remarks on what I saw in a music video on TV.” “I ask a friend whether he/she saw a particular music video.” “I talk about music videos with friends.” “When I spend time with my friends, music videos are a topic of conversation.” “My friends pass comments on what is shown in a particular music video.” Next, we constructed a scale for the frequency of discussion about music videos in the respondents' circle of friends by calculating the mean score for these seven statements for all respondents with a valid response to at least half of these statements. And finally, we transformed this scale to a variable with a standard normal distribution. The resulting scale, discussion frequency proved highly reliable (Cronbach's alpha = .91). This procedure was also applied to all other scales in our research project.

We measured perceived realism of rap/hiphop music videos on the basis of fourteen statements about viewing motive, perceived realism of behavior in the videos, and identification with characters in the videos. Respondents were asked to react to these statements on a four point scale ranging from 1 (strongly disagree) to 4 (strongly agree). The statements were: “When I watch rap/hiphop music videos...I hope to get ideas on how to cope with girls/boys.” “...I learn what can happen to me.” “...I hope to learn something about relationships.” “...I get to know what the adult world is like.” “...I know better how to behave in my love life.” “Men and women in rap/hiphop music videos behave themselves just like people in real life.” “Rap/hiphop music videos show how other people live their lives.” “Characters in rap/hiphop music videos appeal to me.” “I recognize aspects of my own life in rap/hiphop music videos.” “Rap/hiphop music videos show what happens elsewhere as if I were there.” “I imagine sometimes what it would be like to be a character in a rap/hiphop music video.” “I think that in rap/hiphop music videos, men and women associate with each other in a normal way.” “I wish that in real life men and women would deal with each other as they do in rap/hiphop music videos.” “Sometimes I want to be like one of the characters in a rap/hiphop music video.” Factor analysis showed a strong principal factor that explained 43% of the variance of these statements. Building on that result, we constructed a scale for perceived realism of rap/hiphop music videos from all of these fourteen statements (Cronbach's alpha = .89).

As an indication for the perceived sexual permissiveness of their social environment we asked the respondents to react to five statements about the sexual norms of their friends and four statements about the sexual norms of their parents. Again, respondents could react

on a four point scale ranging from 1 (strongly disagree) to 4 (strongly agree). As to the sexual permissiveness of their friends, the statements were the following: “My friends wouldn't mind if I had sex with somebody without having a relationship with him/her.” “My friends would be shocked if I regularly had different kissing partners.” “My friends think that I'd better wait before I start having sex.” “It wouldn't bother my friends if I had more than one partner at a time.” “I talk with my friends about sex.” This last item was presented to the respondents with a different scale, ranging from 1 (never) to 4 (often). Cronbach's alpha was .78. The four corresponding statements about their parents' sexual permissiveness were the following: “My parents wouldn't mind if I had sex with somebody without having a relationship with him/her.” “My parents would be shocked if I regularly had different kissing partners.” “My parents think that I'd better wait before I start having sex.” “It wouldn't bother my parents if I had more than one partner at a time.” Reliability of this scale was .76.

Our instrument to measure the sexual attitudes of adolescents is partly based on Ward's (2002) Attitude About Dating And Sexual Relationships Measure and the many scales in Davis, Yarber, Bauserman, Schreer, and Davis (1998) . Once again, we asked our respondents to react on a four point scale ranging from 1 (strongly disagree) to 4 (strongly agree). Factor analysis of the answers to our sixteen statements showed three factors (see Table 1). The first factor comprised of statements about the traditional idea that men are dominant in sexual relationships. The second factor emphasizes the traditional notion of women as sexual objects, and the third factor pertains to the attitude toward casual sexual relationships (permissive sexual attitude). Thus, three scales were constructed with a Cronbach's alpha of .81, .78, and .83, respectively.

Table 1 Factor analysis of sexual attitudes of adolescents (n = 356).

	h^2	1	2	3
Traditional idea that men should be sexually dominant				
While having sex, the woman should do what the man likes	.74	.79	-.03	-.15
It is alright for a boy to lean hard on a girl to have sex with him	.37	.59	.03	-.02
There is no problem when the man decides what happens during sex	.46	.48	.25	-.08
Men who can get any woman into bed are cool	.49	.45	.11	-.27
A real man can get any girl into bed	.37	.35	.23	-.16
Traditional notion of women as sexual objects				
A woman can best get of with a man by seducing him with her body	.50	.05	.72	.05
Using her body and looks is the best way for a woman to attract a man	.46	-.04	.64	-.09
Being with an attractive woman gives a man prestige	.44	.03	.64	-.02
Girls often say “no” when they really mean “yes”	.47	.27	.57	.06
Women should take greater pains over their appearance than men	.37	.13	.56	.02
Girls like to flirt	.20	-.17	.42	-.11
Positive attitude toward casual sexual relationships				
Having sex outside a relationship is no problem	.72	-.03	-.05	-.89
There is nothing wrong with enjoying sex without affection	.57	.15	.03	-.65
You don't need a relationship to have good sex; all you need are two people who are attracted to each other	.41	-.06	.09	-.61
It is normal to have sex in the early stages of a relationship	.48	.14	.10	-.55
Having sex with someone while you have a relationship with someone else is not a problem	.40	.32	-.02	-.43

Note. Oblique rotation; explained variance 46.5%; $KMO = .92$; $r_{12} = .40$; $r_{13} = -.51$; $r_{23} = -.60$.

Analyses

To find out to what extent the sexual attitudes of adolescents (as dependent variables) were correlated to exposure to rap/hiphop music videos, perceived sexual permissiveness of their social environment, and personal characteristics (as independent variables), we performed three multiple linear regression analyses. In turn, all three sexual attitudes were regressed on the independent variables. In these analyses we also checked for interaction between exposure to rap/hiphop music videos and the frequency of discussion about music videos in the adolescents' circle of friends on the one hand, and perceived realism of rap/hiphop music videos and gender on the other. To that end, we included multiplicative terms in our regression equations (Friedrich, 1982). Prior to our analyses the variables were standardized, save for gender and education. Thus, apart from the parameters for gender and education, the strengths of the regression parameters can be compared to each other. Gender and education were included in the regression analyses as dummies.

Before we discuss our regression results, however, we want to create more insight into the answers of the boys and girls in our sample. Therefore we present means and standard deviations of the unstandardized variables for the group of respondents as a whole, and for boys and girls separately. With *t*-tests and *F*-tests we show whether or not the means and standard deviations of girls' and boys' sexual attitudes, their exposure to rap/hiphop

music videos, the perceived sexual permissiveness of their social environment, and their personal characteristics deviate from each other.

Results

Previous empirical research has regularly shown gender differences as to media use and sexual attitudes among adolescents (Greenberg, Linsangan & Soderman, 1993; Ward & Rivadeneyra, 1999; Eggermont, 2005). Thus, it is hardly surprising that we too find considerable differences between boys and girls in this respect. In Table 2, for instance, one can see that boys are more strongly inclined than girls to think that men are dominant in sexual relationships ($t = 12.16$), to think that women are sexual objects ($t = 7.47$), and to have a positive attitude toward casual sexual relationships ($t = 11.94$). However, for two reasons this does not mean that all boys score extremely high on all three sexual attitudes. First of all, not all boys have the same score. The differences between boys as to the view that men dominate sexual relationships are even significantly greater than between girls ($F = 46.72$). Second, as a group the boys' scores center around the midpoint of the scales. On average, they for instance score below the midpoint of the scale for male dominance ($M = 2.18$) and above the midpoint for women as sexual objects ($M = 2.92$), which means that in general, boys are not prone to think that men dominate sexual relationships, but that they do tend to think of women as sexual objects. As to casual sexual relationships they take a neutral stance ($M = 2.57$). The girls do not agree. They are inclined not to approve of casual sexual relationships ($M = 1.71$) and to deny men their claim on sexual dominance ($M = 1.36$). As to their own role as sexual objects, though, they tend to take a neutral stance ($M = 2.42$).

Table 2 Mean (M) and standard deviation (SD) of measures for adolescents ($n = 384$), and for boys ($n = 151$) and girls ($n = 233$) separately.

	adolescents		girls		boys		difference	
	M	SD	M	SD	M	SD	t	F
Sexual attitudes								
Men are sexually dominant ^a	1.68	0.72	1.36	0.47	2.18	0.74	12.16*	46.72*
Women are sexual objects ^a	2.62	0.68	2.42	0.65	2.92	0.63	7.47*	0.03
Positive attitude toward casual sexual relationships ^a	2.05	0.81	1.71	0.67	2.57	0.73	11.94*	1.86
Exposure to rap/hiphop music videos								
Viewing time (minutes a day)	26.92	54.43	25.24	53.69	29.52	55.63	0.75	0.83
Discussion frequency ^a	2.29	0.72	2.41	0.75	2.10	0.64	-4.34*	5.29*
Perceived realism ^a	1.82	0.56	1.75	0.52	1.93	0.60	3.10*	9.73*
Sexual permissiveness of social environment								
Friends ^a	2.38	0.83	2.09	0.75	2.84	0.72	9.74*	0.36
Parents ^a	1.83	0.78	1.58	0.67	2.22	0.79	8.18*	9.12*
Personal characteristics								
Educational level ^b	1.46	0.50	1.37	0.48	1.61	0.49	4.64*	0.45
Age (years)	15.66	1.31	15.82	1.31	15.40	1.27	-3.07*	0.68

Note. The differences in means (M) between boys and girls were tested with two-tailed t -tests (depending on the F -test we assumed equal or unequal variances) and the differences in standard deviation (SD) between boys and girls were tested with F -tests. ^a range: 1 (low) to 4 (high). ^b range: 1 (vocational, i.e. low) to 2 (secondary, i.e. high).

* $p < .05$.

There is also a marked difference between boys and girls when it comes to the sexual norms they perceive in their social environment. Boys perceive their parents ($t = 8.18$) and friends ($t = 9.46$) to be much more permissive toward sexual behavior on their part than girls. But when we look at the group of adolescents as a whole we see that they do not perceive their world as sexually permissive. They perceive their friends as taking a more or less neutral stance ($M = 2.38$), while they feel that their parents are definitively intolerant ($M = 1.83$). The difference between boys and girls in this last respect is an indication that girls are still brought up more strictly than boys.

As to the time spent on watching rap/hiphop music videos, there appears to be no difference between boys and girls ($t = .75$; $F = .83$). Other indicators of exposure to music videos, however, do show differences between both genders. Among girls, for instance, music videos are discussed more often in their circle of friends, than among boys ($t = -4.34$), and the differences in discussion frequency are also bigger among girls than among boys ($F = 5.29$). On the whole though, adolescents do not discuss music videos very often ($M = 2.29$). This holds true more strongly for the perceived realism of rap/hiphop music videos ($M = 1.82$). On average, both boys ($M = 1.93$) and girls ($M = 1.75$) deem these music videos to be not very realistic. Girls, however, are more pronounced in this respect ($t = 3.1$) and also differ less among themselves ($F = 9.73$) than boys do.

The last lines of Table 2 show that, on average, the girls in our sample are a bit older than the boys ($t = -3.07$) and that they are relatively often attending a vocational school ($t = 4.64$). However, these differences are less interesting than the differences discussed above and the the differences shown by our regression analyses (see Table 3).

Table 3 Regression of sexual attitudes on exposure to rap/hiphop music videos and control variables (n = 381).

	Men are sexually dominant	Women are sexual objects	Positive attitude toward casual sexual relationships
Intercept	-.22*	-.11	-.19*
Exposure to rap/hiphop music videos			
Viewing time (minutes a day)	.11*	.15*	.02
Discussion frequency	-.07	.17*	-.00
Perceived realism	.22*	.15*	.08
Sexual permissiveness of social environment			
Friends	.25*	.40*	.53*
Parents	.04	-.09	.10*
Personal characteristics			
Educational level: high ^a	-.16	-.18	-.00
Age	-.05	-.10*	-.02
Gender: boy ^b	.89*	.51*	.52*
Interaction			
Time*Realism	-.08	-.02	.00
Discussion*Realism	-.02	.01	.01
Time*Gender	-.12	-.16	-.05
Discussion*Gender	.31*	.09	.15
R ²	.47	.38	.56

Note. The regression parameters were estimated after standardization of the non-dummies. The multiplicative terms were calculated after standardization.

^a Dummy with the lower level (vocational) as reference category.

^b Dummy with girls as reference category.

* $p < .05$.

Explained variance in the regression analyses for the three sexual attitudes is .47, .38, and .56, respectively. With our variables we are, thus, fairly well capable of predicting the sexual attitudes of adolescents.

When we look at the first sexual attitude, we see that to the extent that adolescents spend more time on rap/hiphop music videos ($b = .11$) and they perceive them as more realistic ($b = .22$), they are more inclined to think that men are dominant in sexual relationships. We also expected such a relationship for the frequency of discussion about music videos in the circle of friends of the adolescents, but we only found such a relationship among the boys. The parameter for discussion frequency in the table ($b = -.07$) expresses the strength of the relationship among girls, and is not significant. However, when we combine this parameter with the only significant interaction parameter in the table ($b = .31$), then we can conclude that the effect is .24 for boys. Moreover, using the insights of Friedrich (1982), we can determine that this value deviates significantly from zero. Hence our conclusion that when the frequency of discussion about music videos in the circle of friends of boys is higher, they will be more prone to think that men dominate sexual relationships; a relationship we cannot find among girls.

As to the control variables, we see that to the extent that adolescents perceive their friends as sexually more permissive, they are more apt to subscribe to the traditional view of sexually dominant men ($b = .25$). Their parents' views in these matters are of no consequence ($b = .04$), and neither are educational level ($b = -.16$) nor age ($b = -.05$). Gender, however, is. Boys are more inclined than girls to think that men are dominant in sexual relationships ($b = .89$); a conclusion we already arrived at on the basis of Table 2.

As with the traditional attitude that men dominate sexual relationships, the attitude that women are sexual objects can also be predicted by exposure to rap/hiphop music videos ($b = .15$) and the perceived realism of those music videos ($b = .15$). In contrast with the traditional attitude that men dominate sexual relationships, however, there is no interaction between gender and discussion frequency in the circle of friends, here. For both boys and girls, we find that a higher discussion frequency comes with a stronger inclination to believe that women are sexual objects ($b = .17$).

Again, we find that to the extent that adolescents perceive their friends as more permissive toward sexual behavior, they are more inclined to think of women as sexual objects ($b = .40$). And again, the perceived sexual permissiveness of their parents counts for nothing ($b = -.09$), which holds true for education as well ($b = -.18$). Also, boys are more likely than girls to reckon that women are sexual objects ($b = .51$). And finally, age appears to dampen traditionalism with respect to the role of women as sexual objects ($b = -.10$).

The attitude toward casual sexual relationships is in no way related to exposure to rap/hiphop music videos; neither the actual time spent on these videos ($b = .02$), nor the discussion frequency among friends ($b = -.00$), nor the perceived realism of the videos ($b = .08$). The idea that sexual relationships are free of obligations and more like a recreational sport is mainly encouraged by the control variables. Adolescents who perceive the sexual norms in their social environment – especially among their friends, but also those of their parents – to be relatively permissive, have a more positive attitude toward casual sexual relationships themselves ($b = .53$ and $.10$, respectively). Once more, the boys are more convinced than the girls that this is how it should be ($b = .52$).

Thus, we can draw the following conclusions with respect to our hypotheses. Our hypothesis that sexual attitudes may be predicted with the actual time spent on watching rap/hiphop music videos (H1a) and the frequency of discussion about music videos in the adolescents' circle of friends (H1b) is supported for two of the three sexual attitudes. For the attitude that women are sexual objects Hypothesis 1b is supported for boys and girls, but for the attitude that men are dominant in sexual relationships this part of the hypothesis is only

supported for boys. As to the attitude toward casual sexual relationships, Hypothesis 1 is not supported; neither for boys, nor for girls. The second and third hypotheses are not supported. Perceived realism of rap/hiphop music videos and being a girl do not influence the relationship postulated in Hypothesis 1. They do not increase the relationship between viewing time and discussion frequency on the one hand, and sexual attitudes of adolescents on the other. As for the relationship between the frequency of discussion about music videos and the notion of sexually dominant men, we even find the opposite of what we hypothesized.

Conclusion

In this study we investigated the relationship between exposure to rap/hiphop music videos and sexual attitudes, controlled for relevant individual characteristics and sexual permissiveness of parents and friends. The main conclusion is that our quantitative (viewing time and frequency of discussion) and qualitative (perceived realism) conceptualizations of exposure all predict both traditional sexual attitudes in our study. As adolescents aged 13-18 years spend more time watching rap/hiphop videos, and regard them as more realistic, they more strongly agree with the ideas that men dominate sexual relationships and that women are sexual objects. Frequency of discussion about music videos with friends also predicts these attitudes, although discussion predicts one of the attitudes (men dominate sexual relationships) only among boys, whereas no relationship is found among girls. In contrast, the non-traditional idea that sexual relationships are recreational is not related to viewing time, discussion frequency, or perceived realism of rap/hiphop music videos.

These findings are certainly in line with the idea that rap/hiphop music videos may influence the formation and reinforcement of traditional sexual attitudes, but as the study was cross-sectional, we cannot decide whether exposure leads to traditional sexual attitudes or vice versa. Possibly, adolescents with traditional sexual attitudes are more prone to watch and discuss music videos, and find them more realistic. One might argue that if viewing time and discussion would have no influence, concern about the effect of rap/hiphop videos would be unwarranted. The relationship between perceived realism and sexual attitudes, however, seems important no matter what the direction of influence is, because both the reinforcement of traditional sexual attitudes and the reinforcement of the idea that rap/hiphop videos realistically portray sexual relationships seem relevant to those who are worried that people may develop unrealistic and undesirable ideas about sexual relationships.

A possible explanation for the finding that viewing time, discussion, and perceived realism of rap/hiphop videos do not predict the non-traditional attitude that sexual

relationships are recreational is that for this attitude the content of the music videos may not present additional informative value in comparison with other information sources in the direct environment (e.g., the dating-culture) and other audiovisual genres (e.g., television series and movies).

With regard to the attitude that men dominate sexual relationships, we find a relation with discussion of music videos only among boys. The explanation for this gender difference may be found in the content of the discussions. Possibly, boys' discussions reinforce the dominance of men, whereas girls discuss other aspects of the music videos. A focus group study may shed light on this explanation.

We did not find interactions between perceived realism and either viewing time or discussion frequency. Apparently, viewing time and discussion frequency predict traditional sexual attitudes for all levels of perceived realism. Likewise, we did not find interactions between gender and viewing time, yielding the conclusion that the latter variable predicts traditional sexual attitudes for both boys and girls. The absence of these interactions seems to contradict previous studies that did find a moderating influence of perceived realism (Taylor, 2005) and gender (Johnson et al., 1995; Ward, 2002). However, these studies investigated the immediate impact of a small number of specific music videos, whereas our study addressed the impact of exposure to rap/hiphop videos in general.

Gender proved to be a strong predictor of all three sexual attitudes in our study. This finding confirms previous research that boys agree more strongly with the specific sexual attitudes in our study than girls do (e.g., Eggermont, 2005; Greenberg et al., 1993; Ward & Rivadeneyra, 1999; Zhang et al., 2008).

Another important predictor of sexual attitudes, the sexual permissiveness in the peer group, is more interesting, because it has not been included in previous related research. As their friends have more liberal notions about sexual relationships, adolescents agree more with the traditional attitudes that men are dominant in sexual relationships and that women are sexual objects, and with the non-traditional notion that sexual relationships are recreational. The sexual permissiveness of parents predicts only the non-traditional sexual notion; as their parents' views are more liberal, adolescents more strongly believe that sexual relationships are recreational, although the relationship with parental permissiveness is less strong than with peer group permissiveness.

Worth mentioning is that the attitude that women are sexual objects was negatively predicted by age. This finding suggests that agreement with this view diminishes as

adolescents get older. An interesting question is whether this apparent age trend continues after the age of 18.

A limitation of this study is that it did not include a representative sample of the Dutch 13-18 year-olds. Therefore, our findings that only a minority of adolescents agree with the sexual attitudes in our study and perceive the content of rap/hiphop videos as realistic may not be generalizable to the population. However, our sample is heterogeneous with respect to education, age, gender and ethnicity which are all relevant to sexual attitudes. Therefore, we feel confident that our findings regarding relations between variables are reliable. Moreover, because we selected schools in lower educational levels that have relatively many students from ethnic minorities, and the questionnaires were filled out in classrooms, we do not have the problem of selective non-response that is particularly problematic in lower educational levels and ethnic minorities. Therefore, our conclusions also pertain to these often underrepresented groups. A second limitation of this study is that it addresses only music videos whereas other television genres and Internet also present a large volume of sexual content. The focus on one genre decreases the chance of finding relations. Therefore, it is possible that research including more media and more genres yield more or stronger relations between variables.

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